

RECLAMATION

Managing Water in the West

Mid-Pacific Region

Central Valley Project Water Plan 2011



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

February 18, 2011

ON THE FRONT COVER

*Left, California Aqueduct
Right, Delta-Mendota Canal*

ON THE BACK COVER

*C.W. “Bill” Jones Pumping
Plant*

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BUREAU OF RECLAMATION MISSION STATEMENT

*To manage, develop and protect water and related resources in an
environmentally and economically sound manner in the interest of
the American public.*

Introduction

BUREAU OF RECLAMATION: CENTRAL VALLEY PROJECT WATER PLAN 2011

The Bureau of Reclamation has developed the “Central Valley Project Water Plan 2011” as a snapshot of the various programs and projects being considered and, where necessary, implemented to improve water supply availability and management throughout the Central Valley Project (CVP).

An agency of the U.S. Department of the Interior, Reclamation manages the CVP, a complex network of reservoirs and canals across northern and central California that serves the semi-arid Central Valley. Instrumental to the project are relationships and partnerships with other federal, state and local government agencies and the public. The common need for water, including a shared concern for a sustainable ecosystem, bring diverse interests together, resulting in a better opportunity for success.

The Central Valley is home to millions of people, diverse fish and wildlife, and farms that produce up to \$10 billion in crops annually. The project helps provide water for drinking, industry and agriculture, even during dry spells and droughts. Since the 1950s, the project also has provided flood protection throughout the Sacramento and San Joaquin Valleys.

Construction of major CVP facilities included breaking ground in 1938 on Shasta Dam on the Sacramento River near Redding in Northern California. Over the next 5 decades, the U.S. government expanded the CVP into a system of 20 dams and reservoirs that together have a

capacity of 12 million acre-feet and provide flood control benefits, water supplies, and recreational opportunities. The CVP includes 500 miles of canals and aqueducts and 11 hydroelectric powerplants. The CVP extends 450 miles from the Redding region to the Bakersfield area. In Sacramento, an operations center office jointly controls, with the California Department of Water Resources (DWR), the CVP and its companion, the State Water Project.

Most of the CVP’s water comes from rain and melting snow in the Sierra Nevadas. Releases from reservoirs flow through rivers and canals to the Central Valley, serving contractors in the northern half, referred to as the Sacramento Valley, and the southern half, which is referred to as the San Joaquin Valley. The Sierra Nevadas snowmelt enters the Sacramento-San Joaquin River Delta, where it sustains fish and wildlife and is used to maintain water quality in the Delta. At the Delta’s southern end, a pumping station with a current operational capacity of 4,100 cubic feet per second draws varying amounts of water to supply CVP contractors to the south.

Reclamation balances allocation of CVP water for agricultural, environmental, and municipal and industrial purposes. The complex task is driven by numerous factors, including hydrology, conditions as reported by DWR, storage in CVP reservoirs, input from other agencies and organizations, regulations, court decisions, biological opinions, environmental considerations, and operational limitations.

Chapter 1: Water Allocation Process

As the largest wholesaler of raw water supplies in the United States, Reclamation holds contracts with many water districts and municipalities which commit the agency to provide up to a maximum quantity of water in any particular year. Each year, Reclamation must determine, based on meteorological and hydrological conditions and other operational and institutional factors, how much water can actually be delivered to each district and municipality. This is called the allocation process. Allocations are usually expressed as a percentage of the maximum contract volumes of water prescribed in the contracts held between Reclamation and the various water districts, municipalities and other entities.

Early in the calendar year, California agricultural water users plan their projected cropping patterns and water needs for the upcoming growing seasons. This is critical as farmers must consider a multitude of financial issues, and planning their farming operations is largely dependent upon knowing how much CVP water Reclamation will be able to deliver. The ability to identify their water supply is also critical for municipalities, especially in water shortage conditions.

The Mid-Pacific Region's Central Valley Operations Office (CVO) begins the water allocation process in the fall when preliminary assessments are made of the upcoming year's water supply possibilities. These assessments are based upon current storage conditions in CVP reservoirs combined with a range of possible hydrologic conditions. The CVP allocation is based upon analyses which are performed at least once per month, subsequent to the monthly issuance of the official National Weather Service (NWS)/DWR meteorological and runoff forecasts. The first allocation announcement is made around February 20, just prior to the beginning of the new contract year on March 1. Usually two operational outlooks are developed.

The first operational outlook is based on a forecast using a conservative hydrology set which technical specialists estimate has a 90-percent chance of being wetter (and a 10-percent chance of being drier). The second outlook is based on a forecast using a median hydrology set which specialists estimate has a 50-percent chance of being wetter (or drier). The first is typically viewed as a "dry" outlook because operators are conservatively estimating the amount of water they feel can be delivered over the course of the year, even considering all the uncertainties associated with weather and runoff forecasts and historic hydrologic conditions. The second is considered a "wet" outlook as operators are estimating a higher amount of water that might be available (hence "wetter") and taking some risks in evaluating the weather forecasts and historical hydrologic conditions. These characterizations can be somewhat

misleading, however. From October to December, there is typically little snowpack data, and the inflow hydrology set which is used is derived from a long-term average of historic data. In that case, the 90 percent is dry and 50 percent is the median of historic data, which is slightly drier than the long-term average due to the skew produced by a few very large storms. Once NWS/DWR forecasts become available (usually January through May), the hydrologic data used for analysis switches from long-term averages to more specific projections pertaining to the current water year. The runoff forecasts are then derived from monthly snowpack measurements, which are manual measurements and electronic readings of snowpack water content from remote sensors located throughout the Sierra Nevada range, and statistical runoff curves.

Water Year (WY) 2010 provides a good example of how the 90- and 50-percent water supply allocations converge from February through May (fig 1). In February 2010, the initial water supply allocation for the South-of-Delta (SOD) CVP agricultural water users was 5 percent due to continuing drought conditions in the state and restrictions on pumping. The water supply allocation under a 50-percent hydrology based on February 2010 conditions for the same users was 30 percent. SOD contractors are illustrated here because this particular set of contractors have received both the lowest and least reliable allocations over the past decade. Most other CVP contractors received 100 percent allocations at both the 90 percent and 50 percent in the February 2010 allocation. As WY 2010 progressed with an unusually wet spring, the hydrology approached more normal conditions and fewer actions were required to protect Endangered Species Act-listed (ESA) fish species than initially projected. The 90-percent allocation increased through this period to match the 50-percent allocation by May 2010.

In addition to the runoff data (primarily projected reservoir inflow), a number of regulatory requirements are input into the forecast analysis. These regulatory requirements include various river flow requirements and Delta standards relating to such things as fishery

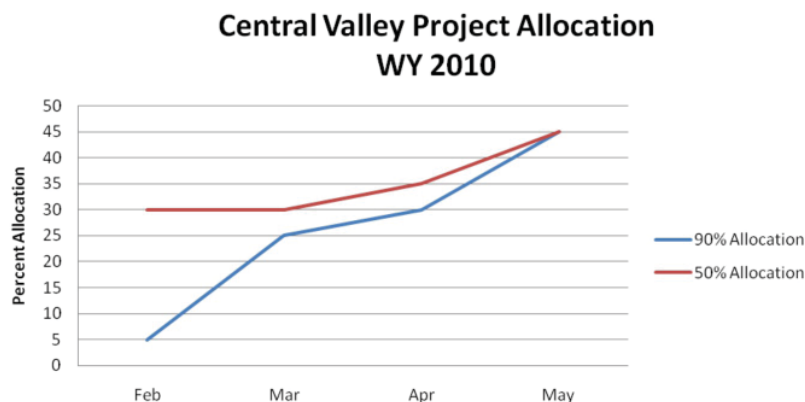


Figure 1: Central Valley Project Allocation for South-of-Delta, Water Year 2010

flows, water quality, and salinity control as required by the CVP water permit issued by the State of California. The operations are analyzed 1 month at a time. CVO staff combine their institutional knowledge and experience and optimize reservoir and export operations given the system, regulatory permit and ESA (Biological Opinions) constraints which are applicable in the current water year. The final step in the analysis process is to select an allocation and demand set which fully utilize San Luis Reservoir storage by drawing the reservoir down to established minimums in late summer. This level is known as the San Luis low point. Per ESA requirements, the 90-percent outlook is used to determine allocations and the 50-percent outlook is provided for informational purposes. Currently, review and concurrence is required by National Marine Fisheries Service (NMFS) prior to allocation announcements.

Forecasts of runoff and operations plans are updated monthly or more often as necessary between February and May. Like the NWS/DWR runoff forecasts, the operations outlooks are initially uncertain. Given the current Biological Opinions, a large period of uncertainty is tied to the December-June Old and Middle River regulatory requirements. Because a conservative (90 percent) outlook of runoff is used early in the year, it is quite likely that the estimated water supply will increase as the year progresses. While this may result in increased allocations, it also means that the final water allocation may be delayed until May or June. This adds to the uncertainty facing agricultural contractors who need a reliable outlook of available supply as early as possible (typically by March) to aid in their decision-making.

Hydrologic conditions in WY 2011 started out extremely wet, and early indices surpassed 1983, the wettest year on record. However, conditions in January reversed direction and California saw one of the drier months on record. The February hydrologic indices fell back towards a more normal year, especially in the Northern Sierra. The February 1, 2011, remote snow sensor readings indicate that statewide mountain snowpack is 134 percent of average and 84 percent of the April 1 average. As of February 10, 2011, Northern Sierra precipitation is 115 percent of average (fig 2), and as of February 9, 2011, San Joaquin basin precipitation is 154 percent of average (fig 3). The NWS/DWR February runoff forecast will reflect this latest precipitation and snowpack information and are used in CVO's February water supply allocation.

A key component of the CVP, Friant Dam and Millerton Lake are located east of Fresno, California, on the San Joaquin River, and water supply allocations for this element of the CVP are performed independent of the rest of the CVP. Development of the Friant Division water supply allocation begins by calculating the current water stored in Millerton Lake, adding the upstream storage on the Southern California Edison and Pacific Gas & Electric reservoirs, then subtracting the artificial dead storage (the amount of water

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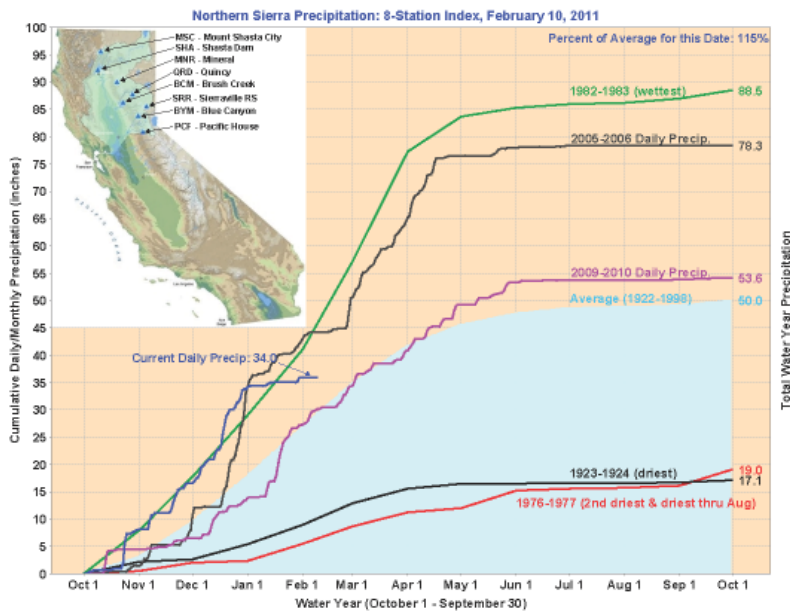


Figure 2: Northern Sierra Precipitation: 8-Station Index, February 10, 2011

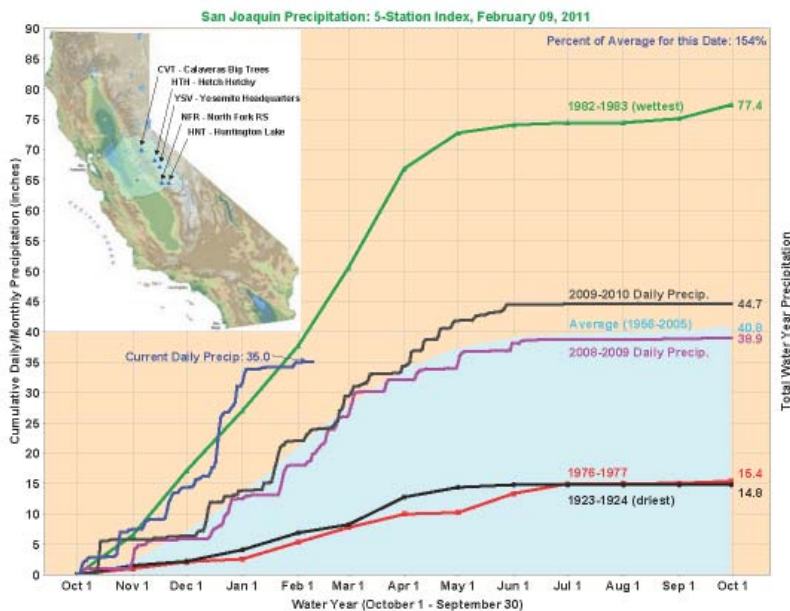


Figure 3: San Joaquin Precipitation: 5-Station Index, February 9, 2011

within the reservoir's minimum fully operational level), the San Joaquin River Restoration Program releases, any riparian releases, and prior year rescheduled water. Based on the outcome of that calculation, Reclamation determines a volume of water that is available for allocation for the Friant Division. The first 800,000 acre-feet of water supply is considered Class 1; any remaining water is considered Class 2. Based upon DWR's February Water Year 2011 Runoff Forecast, the preliminary Friant Division water supply allocation is 100 percent of Class 1 (800,000 acre-feet) and 20 percent of the contracted supply of 1.4 million acre-feet of Class 2 (280,000 acre-feet).

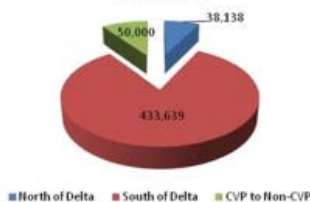
Class 1

"Class 1 Water" shall mean that supply of water stored in or flowing through Millerton Lake which, subject to the contingencies described in the water service contract, will be available for delivery from Millerton Lake and the Friant-Kern and Madera Canals as a dependable water supply during each Contract Year.

Class 2

"Class 2 Water" shall mean that supply of water which can be made available subject to the contingencies described in the water service contract for delivery from Millerton Lake and the Friant-Kern and Madera Canals in addition to the supply of Class 1 water. Because of its uncertainty as to availability and time of occurrence, such water will be undependable in character and will be furnished only if and when it can be made available as determined by the Contracting Officer.

**2010 CVP Water Transfers by
acre-feet**



**2010 CVP Water Transfers by
acre-feet**

North of Delta	38,138
South of Delta	433,639
CVP to Non-CVP	50,000

Chapter 2: 2011 Water Transfers

Reclamation will continue to facilitate CVP water transfers in 2011 by expediting environmental compliance/approval and acknowledging water transfers in place that are consistent with federal and state law. Reclamation will also continue to work with CVP contractors on the conveyance and storage of non-CVP transfer water through Warren Act contracts and reservoir refill criteria. In addition, Reclamation will act on CVP contractors' requests to reschedule 2011 transferred water in CVP storage facilities, if required, for use in 2012.

Accelerated Water Transfer Program (AWTP)

The AWTP allows water transfer and/or exchange agreements between CVP contractors that had historically occurred before enactment of the 1992 Central Valley Project Improvement Act (CVPIA) to be acknowledged by Reclamation. AWTP actions have occurred since 1996. Reclamation currently has in place required environmental documentation for the transfer and exchange of up to 500,000 acre-feet of water in 2011 covering the following areas: (1) Sacramento Valley, (2) Friant Division contractors, and (3) SOD CVP contractors, including those in the Delta Division, San Felipe Division and San Luis Unit. The SOD AWTP also allows Cross Valley contractors to transfer to SOD contractors, and the Friant AWTP allows Friant Division contractors to transfer to Cross Valley contractors.

San Joaquin River Exchange Contractor (SJREC) Transfers

Environmental Assessments (EA) are in place covering water transfers of 80,000 acre-feet per year from the SJREC to San Luis & Delta-Mendota Water Authority (SLDMWA) contractors, federal and private wildlife refuges and Friant Division contractors. Distribution of this water depends on the CVP's annual water supply allocation, with more water going to west side SLDMWA contractors in lower allocation years. EAs are also in place for the transfer of up to 50,000 acre-feet of additional water from the SJREC to SLDMWA contractors and the wildlife refuges; however, this water would be made available through crop idling by the SJREC, which may occur in 2011. Programmatic approval also exists for an annual transfer of up to 20,000 acre-feet available by groundwater pumping, water conservation and fallowing to SLDMWA contractors. EAs are also in place for individual members of the SJREC, specifically the Central California Irrigation District for 20,500 acre-feet and the Firebaugh Canal Water District for 5,000 acre-feet, to annually transfer water made available by groundwater substitution to various SLDMWA contractors.

East to West Water Transfers

In 2008, regional policy was revised to allow East to West transfers to occur as a “transfer facilitated by an exchange.” The San Joaquin River Restoration Settlement Act (SJRRSA) allows for the exchange or transfer of San Joaquin River water recaptured in San Luis Reservoir to reduce or avoid impacts to deliveries to Friant Division contractors caused by the SJRRSA Interim Flows and Restoration Flows. In 2010, P.L. 111-85, Energy and Water Development and Related Agencies Appropriations Act, provided for the transfer of CVP water between Friant Division contractors and SOD CVP agricultural water contractors. This legislation suspended for 2 years the CVPIA requirement that transfer water in these areas be limited to historic use and to the amount that would have been consumptively used and/or irretrievably lost absent the transfer. As a result of these actions/authorizations, 25,000 acre-feet was transferred in 2010.

Lower Yuba River Accord

Under the Lower Yuba River Accord, up to 70,000 acre-feet can be purchased by SLDMWA members annually from DWR. This water must be conveyed through the federal and/or state pumping plants in coordination with Reclamation and DWR. Because of conveyance losses, the amount of Yuba Accord water delivered to SLDMWA members is reduced by approximately 25 percent to approximately 52,500 acre-feet.

North to South Water Transfers

In 2010, Reclamation completed an EA for the 2010-2011 Water Transfer Program to allow for the transfer of water from willing sellers upstream of the Delta to buyers that export water from the Delta. The EA covered transfers of up to 220,000 acre-feet; however, because of current pumping restrictions in the Delta and limitation on the quantity that can be transferred from crop idling actions, the anticipated transferred amounts are significantly less. Transfer actions will likely be limited to the amount of water that can be made available by groundwater pumping.

Transfer Programs Currently Covered by Environmental Documents		
Transfer Program	2010 Transfers	2011 Potential Transfers ¹
SOD/Cross Valley Contractors	65,307	150,000 ²
Accelerated Sacramento Valley	30,681	31,000
Friant/Cross Valley Contractors	208,141	255,000
SJREC	129,454	175,500
North to South	0	110,000 ³
Yuba Accord to SLDMWA	0	70,000
East to West	25,000	25,000
CVP to Non-CVP	Up to 50,000 ⁴	20,000

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¹ Estimates do not include reductions for conveyance losses.

² Although there is environmental coverage for up to 150,000 acre-feet for the SOD/Cross Valley AWTP and 255,000 for the Friant Division/Cross Valley AWTP, historically the actual amount transferred and/or exchanged is less than the maximum analyzed.

³ Although there is environmental coverage for up to 110,000 acre-feet of groundwater substitution transfers for 2011, only a small percentage of this amount will likely be actually transferred because of conveyance limitations in the Delta and the already-approved Yuba Accord transfers.

⁴ In 2010, Reclamation approved a Westlands WD and San Luis WD to MWD Transfer and Exchange Project (up to 100,000 acre-feet exchanged and 50,000 acre-feet transferred to MWD). The actual amount transferred will be confirmed by April 30, 2011.



Confluence of clear water (left) and turbid water (right), lower San Joaquin River. Photo by Erwin Van Nieuwenhuyse, Bureau of Reclamation

Chapter 3: Near-term Science

Operating the CVP in an environmentally responsible manner requires adjustments in the timing and quantity of water exported from the Delta that are specifically designed to protect fish populations listed as threatened or endangered under the ESA. These adjustments often result in reduced water supply because they are based on a strategy that attempts to manage fish movement and distribution by controlling the quantity and direction of water flow through the Delta.

Recent scientific studies suggest, however, that fish movement and distribution may also be controlled by the movement and distribution of suspended sediment within the Delta. In particular, it appears that delta smelt (an ESA-listed minnow endemic to the Delta) tend to favor sediment-laden water and avoid clear water when migrating each winter from Suisun Bay to their spawning grounds in the Delta. A dual strategy of managing flow and suspended sediment in the Delta may thus make it possible to simultaneously protect delta smelt and perhaps other listed fish populations while increasing the amount and reliability of Delta exports.

In partnership with the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the California Department of Fish and Game and others, Reclamation has taken the first step toward implementing this strategy by initiating a multi-disciplinary effort to:

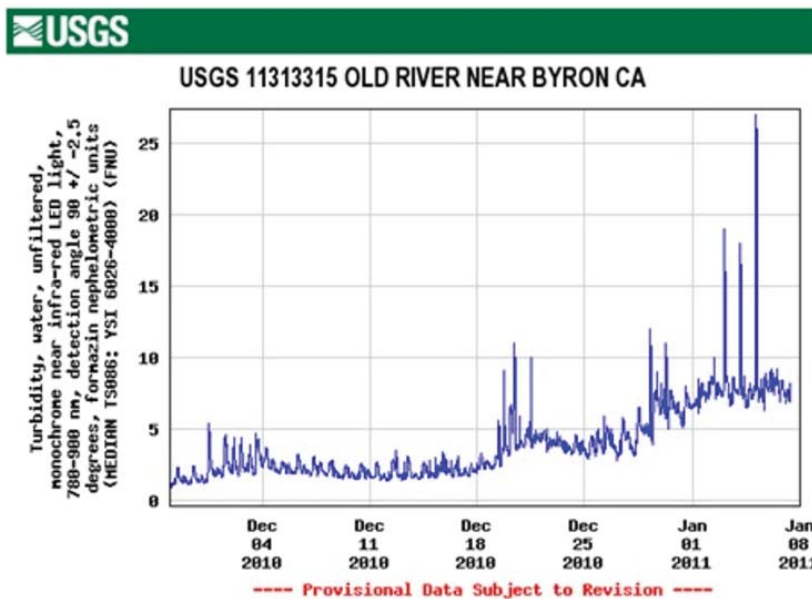
- Document how delta smelt and other fish populations respond to the “first flush” of the 2010-2011 high-flow season.



Delta-Mendota Canal

- Expand the network of near real-time monitoring stations that continuously monitor water flow and turbidity throughout the Delta.
- Formulate, calibrate and validate a suspended sediment model that can be used to manage the distribution of turbid water within the Delta.

This near-term science effort complements other scientific studies focused on the longer term task of integrating protection measures for delta smelt with measures designed to benefit Chinook salmon, steelhead trout, green sturgeon and other ESA-listed fish species that inhabit the Delta.



Example of real-time turbidity data for a continuous monitoring station in the Delta

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Delta Smelt (*Hypomesus transpacificus*)
Photo by Peter Johnson, Bureau of
Reclamation



Chapter 4: Water Augmentation

Several years of drought significantly added to California's serious water supply challenges, specifically for the SOD agricultural water service contractors on the west side of the San Joaquin Valley (west side). In recognition of these challenges, the Secretary of the Interior directed the Department to work with state agencies and others to identify and secure additional water supplies and opportunities to aid in improved operations and increased allocations earlier in the water year for all water customers and specifically for the west side farmers.

A Water Allocation Workgroup composed of Reclamation and DWR representatives and water users was established to explore opportunities and establish partnerships to equitably maximize the allocation of available water resources given current and future hydrologic conditions and operational requirements. The Workgroup's objective is to take a proactive planning approach to identify strategies, tools and agreements that can be put in place as needed to achieve the desired benefits. Proposed specific actions could provide additional water at the most critical times for the agricultural business cycle and within the physical, regulatory and legal constraints currently guiding the federal and state agencies charged with managing the CVP and SWP, the two main water delivery systems in California.

The tools that may be considered to provide supplemental water supplies or aid in increasing water allocations earlier in the water year are described below.

Source Shifting

The Metropolitan Water District of Southern California (MWD) would use alternative water supplies while all or a portion of their SWP supplies remain in storage in San Luis Reservoir. This will augment early CVP allocations, allowing access to 100 percent of CVP supplies in the reservoir. MWD would take delivery of their supplies from San Luis Reservoir after low point (a point at which water levels within the reservoir are affected by decreased water quality) has been reached and prior to the end of the calendar year. This action could help bolster an earlier, higher CVP water allocation by allowing Reclamation to support San Luis low point. This action would not increase the available water to allocate since it would be returned to MWD after low point.

Diversification of Level 2 Refuge Water (2012)

Reclamation is in the process of refurbishing five wells and constructing five new wells in the Grassland Water District with funding from the American Recovery and Reinvestment Act. In 2012, these wells could produce additional water that would be used to help meet Level 2 refuge water demands in lieu of CVP water and also go into the project yield for allocation to meet CVP demands. The water would be discharged into the canals which deliver water into the Grassland Bypass and would most likely need to be blended with surface water to meet water quality standards established by the Regional Water Quality Control Board. This action would increase the available CVP water supply. This water would be “new” water available to allocate.

Improved and Integrated Operations

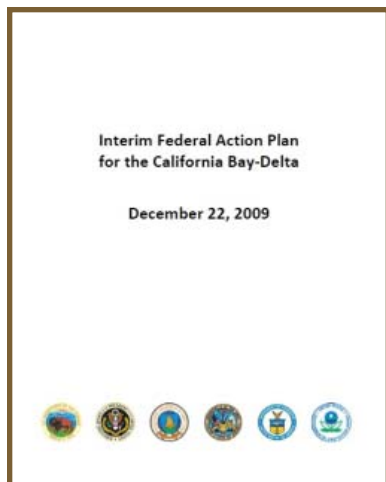
Improved coordination of operations requires developing a communications plan for regular, ongoing and timely meetings among Reclamation, DWR and water users to share information and maximize opportunities for coordination efforts. Improved coordination efforts include, but are not limited to: (1) exploring additional ways to optimize the filling of San Luis Reservoir to maximize federal and state water supplies, and (2) working with fishery agencies to modify the Old and Middle River flow restrictions to a formula-based operation to eliminate uncertainties and increase flexibility.

Joint Point of Diversion Operations

The State Water Resources Control Board Water Rights Decision 1641 authorized DWR to add the CVP’s C.W. “Bill” Jones Pumping Plant to their water rights and authorized Reclamation to add the SWP’s Harvey O. Banks Pumping Plant to their water rights for diversion and re-diversion of water in the southern Delta. Stage 1 authorizes diversion or re-diversion at Banks to recover export reductions taken to benefit fish. Dedicated capacity at Banks would actually increase the available water to allocate.

Restoration Flows Exchange

San Joaquin River Restoration Program (SJRRP) flows recaptured at Mendota Pool and/or at the Delta pumps and not spilled from the San Luis Reservoir in 2011 would be used to augment the water supplies of the west side CVP contractors during the peak irrigation season. After the peak irrigation season, a like amount of water would be returned in the San Luis Reservoir for use by the Friant Division contractors. SJRRP water backed into San Luis could be used to bolster an earlier, higher allocation.



Front cover of the "Interim Federal Action Plan for the California-Bay Delta, December 22, 2009"

Chapter 5: Interim Federal Action Plan

In December 2009, six federal agencies issued the "Interim Federal Action Plan for the San Francisco Bay/Sacramento-San Joaquin Delta" describing federal actions and investments the Obama Administration is taking to help address California's water supply and ecological crises. The Department of the Interior (Bureau of Reclamation), Department of Commerce, Department of Agriculture (Natural Resources Conservation Service [NRCS]), Department of the Army (U.S. Army Corps of Engineers), Environmental Protection Agency, and the Council on Environmental Quality formed a partnership with the State of California and local agencies to develop long- and short-term strategies to address the causes of ecosystem decline and to bring greater reliability to the management of water supplies.



Ceremonial start of the Delta-Mendota Canal/California Aqueduct Intertie Project. Shown from left, Mike Stearns, San Luis & Delta-Mendota Water Authority Chairman; David Hayes, Deputy Secretary of the Interior; Michael Connor, Bureau of Reclamation Commissioner; Congressman Dennis Cardoza, District 18; Congressman Jerry McNerney, District 11; Ken Salazar, Secretary of the Interior; California Senator Dianne Feinstein; Congressman Jim Costa, District 20; California Assembly Member Anna Caballero, District 28; and Lester Snow, Secretary of the California Natural Resources Agency.

Addressing the challenges in the Bay-Delta requires action on many fronts, but key to a long-term plan for ecosystem restoration and water management is California's Bay Delta Conservation Plan (BDCP). The BDCP's goals are to identify conservation strategies to improve the overall ecological health of the Delta, identify ecologically friendly ways to move fresh water through and around the Delta, identify actions to address other stressors, and provide a framework to implement the BDCP over time. The federal government is committed to advancing the BDCP process to a successful conclusion.

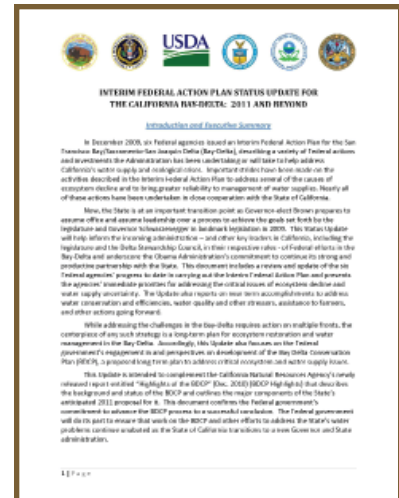
The BDCP is only one part of the Obama Administration’s comprehensive commitment to addressing California water issues. Significant investments made by the federal government include working closely with independent science panels to better understand and address issues associated with the continuing decline of Bay-Delta endangered and threatened species, promoting water conservation and efficiency improvements throughout California, and expediting and expanding voluntary water transfers in the Central Valley.

The Action Plan addresses water conservation and the alignment and coordination of federal water conservation programs to leverage limited resources and maximize benefits of water conservation in areas served by the federal Central Valley Project (CVP) and the State Water Project (SWP). A key milestone is being achieved with construction of the Intertie between the federal Delta-Mendota Canal (DMC) and the California Aqueduct. Two 108-inch-diameter pipes and a pumping plant with a pumping capacity of 467 cubic feet per second will connect the CVP and SWP, address certain canal conveyance limitations, enhance flexibility of water deliveries, and allow for infrastructure maintenance and repairs without disrupting water deliveries. The Intertie will also address DMC conveyance conditions that presently restrict use of the CVP’s Jones Pumping Plant to less than its design capacity, potentially restoring as much as 35,000 acre-feet of average annual deliveries to the CVP. The Intertie is expected to be fully operational in 2012.

To further address water conservation, Reclamation and NRCS are partnering to leverage funding opportunities for water delivery agencies and agricultural producers in the Bay-Delta region. The partnership will result in funding projects that improve water supply reliability through water conservation or improved water management, improve energy efficiency, and address endangered species and other environmental concerns. Specifically, Reclamation has made available a 2011 WaterSMART Funding Opportunity Announcement for Bay-Delta Agricultural Water Conservation and Efficiency grants. NRCS will provide accelerated funding and technical assistance to farmers, using Farm Bill programs, for the on-farm conservation practices of selected WaterSMART projects.

Under the Action Plan, the federal agencies are working together to address the range of stressors affecting aquatic species of concern in the Bay-Delta by restoring habitat, constructing hatcheries, preventing fish from being entrained in water diversions by installing fish screens, reducing contaminant levels in Bay-Delta water, and other activities. Additionally, the federal and state agencies are working together to use disaster programs to provide drought relief to farmers and ranchers when needed and to develop plans to stabilize existing flood control infrastructure and manage flood risk.

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Front cover of the “Interim Federal Action Plan Status Update for the California Bay-Delta: 2011 and Beyond”



Excavation of the pumping plant intake at the Delta-Mendota Canal, which will connect to the California Aqueduct

Chapter 6: Rescheduled Water

The ability to reschedule (carry over) water in San Luis Reservoir from one contract year to the next has been available to the water service contractors south of the Delta since the early 1990s. The program was instituted after a series of dry years in order to encourage conservation and best management practices of water. Over the years, the number and frequency of CVP contractors utilizing rescheduling has increased as has the amount of water requested to be rescheduled. In order to avoid impacts to CVP operations, Reclamation has established Rescheduling Guidelines for delivery and payment of water carried over from one contract year to the next. Contract year 2011 is March 1, 2011, to February 29, 2012.



San Luis Reservoir

Following are general guidelines regarding rescheduling water from contract year 2010 to 2011:

- The rescheduling of water is subject to available storage capacity and a storage priority schedule that gives first priority to 2011 contract year water, including water allocated/acquired for refuge and wildlife habitat restoration.
- Rescheduled water may not impact the 2011 contract year water supply, and Reclamation has discretion to limit the amount of rescheduled water in San Luis Reservoir if it appears that it may impact future CVP operations.
- If the federal share of San Luis Reservoir (966,000 acre-feet) fills and rescheduled water is in the reservoir, the total

amount of rescheduled water is reduced by an amount equal to the quantity of water Reclamation was unable to pump due to the presence of the rescheduled water. A quantification of the reduction, however, is not made until after the occurrence of a sustained 3-day drawdown in the federal share of San Luis Reservoir.

- Rescheduled water must be the first water scheduled and used by the contractors in the new contract year.

Reclamation estimates that contractors may request that about 270,000 acre-feet may be rescheduled from contract year 2010 to 2011. The federal share of San Luis Reservoir filled on February 6, 2011, and a sustained drawdown will take place the beginning of April when NMFS's 2009 Biological Opinion restricts state and federal pumping to a combined 1,500 cubic feet per second at the Banks and Jones pumping plants. It is anticipated that the contractors will be able to take delivery of some of the rescheduled water between March 1 and the beginning of April; however, there is a possibility that contractors may lose some of the 2010 rescheduled water in order to prevent an impact to 2011 CVP water supplies. In anticipation of San Luis Reservoir filling and in order to avoid the loss of water that would otherwise have been rescheduled, Westlands Water District (Westlands), San Luis Water District, and Metropolitan Water District of Southern California (MWD) agreed to an unbalanced exchange of water whereby Westlands and San Luis sent 110,692 acre-feet of their 2010 allocation to MWD in late 2010, and MWD will return two-thirds of that amount to Westlands and San Luis in summer 2011.



San Luis Reservoir

CVP Map



Acronyms

BUREAU OF RECLAMATION: CENTRAL VALLEY PROJECT WATER PLAN 2011

AWTP	Accelerated Water Transfer Program
Banks	Harvey O. Banks Pumping Plant (state)
CVO	Central Valley Operations Office
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
EA	Environmental Assessment
ESA	Endangered Species Act
fig.	figure
IFAP	Interim Federal Action Plan
Jones	C.W. “Bill” Jones Pumping Plant (federal)
MOU	Memorandum of Understanding
MWD	Metropolitan Water District of Southern California
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWS	National Weather Service
P.L.	Public Law
SJREC	San Joaquin River Exchange Contractors
SJRRP	San Joaquin River Restoration Program
SJRRSA	San Joaquin River Restoration Settlement Act
SLDMWA	San Luis & Delta-Mendota Water Authority
SOD	South of Delta
SWP	State Water Project
U.S.	United States
WD	Water District
west side	west side of the San Joaquin Valley
WY	Water Year



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